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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,421	01/30/2002	Herald M. Baldonado	TI-32857	5110

7590 08/28/2002

Mike Skrehot
Texas Instruments Incorporated
M/S 3999
P.O. BOX 655474
Dallas, TX 75265

EXAMINER

CLARK, SHEILA V

ART UNIT	PAPER NUMBER
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2815

DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/066,421

Applicant(s)

Baldonado et al

Examiner

Sheila V. Clark

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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Claims 1-21 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

It is unclear what the device structure is of the interposer substrate of the instant invention. The interposer pad is the only device that appears to be shown in the drawings and the specification fails to describe said substrate. There is further no description of an electroless substrate (other than a mention of the substrate on page 2, line 7) in the disclosure nor shown in the drawings. It is also unclear to what "electroless" refers in this instance.

Other than a mention there is also no description or showing in the drawing of a ball grid array. Where is this array located? The chip shown and discussed utilizes wire bonding so it is unclear where a ball grid array would be positioned or located.

There also appears to be no description in the disclosure of for a floating interposer pad.

Further the disclosure discloses use of two wires connected to the interposer. It is unclear where there is basis for single bond wire attached to the interposer pad as recited in claims 3.

There also appears to be no discussion in the disclosure or showing in the drawings for a chip having the particular input, output, supply and ground nodes.

It is also unclear where a plurality of interposer pads are located.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the electro-less substrate, single continuous bond wire, ball grid arrays, plurality of interposer pads, floating interposer pad. must

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be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear how a single wire may comprise a first and second bond wire. This seems to be contradictory.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-21 in so far as definite are rejected under 35 U.S.C. 102(e) as being anticipated by Schmidt et al.

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Schmidt et al shows a first end of a first bonding wire attached to chip 2 and a second end attached to an interposer pad 4. A second bonding wire is attached at a first end to said interposer pad and at a second end to lead 3. Said bond wire is gold and col.5, line 1 teaches providing ball bonding to said interposer pad.

Claims 1-21 in so far as definite are rejected.

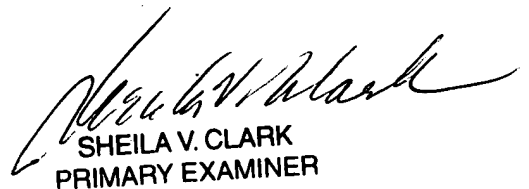
Hite, Muto et al, Hyoudo et al, Tsumura, LeParquier et al, Sawaya, Long, Aoki et al and Gow 3rd et al, Gainey et al and Tsuji et al are cited to show wire bonding structures and methods using an intermediate interposer pad to reduce wire sweep and wire shorts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner S.V. Clark whose telephone number is (703) 308-4924.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee, can be reached on (703) 308-1690. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

August 22, 2002


SHEILA V. CLARK
PRIMARY EXAMINER